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EXAMINER	
WOODS, ERIC V	
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Please find below and/or attached an Office communication concerning this application or proceeding.

94

Office Action Summary	Application No. 10/680,195	Applicant(s) HU, YAO-TIEN	
	Examiner Eric V Woods	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: USB Transmission Speed and Mode Indicator and Measurement Device.

2. The abstract of the disclosure is objected to because the term "logic analysis device" is misused. That is, in the computer art a "logic analysis device" is a system such as a hardware-based logic analyzer unit capable of taking multiple simultaneous I/O readings for analyzing circuitry, et cetera. Again, see the objection to the title – similar changes in wording should be affected in the abstract such that appropriate wording – e.g. – USB Operation and Speed Indicator System – should be used.

Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following inaccuracies:

-Paragraph [0002] is not accurate and must be revised – that is, the wording "The USB has three transmission speeds" is not complete. It is necessary that the revision of the standard be cited - e.g. low-speed is USB 1.0, full-speed is USB 1.1, and high speed is USB 2.0, and it should be enumerated which speeds are available on which revisions, as set forth immediately above;

-USB is a standard, not simply a bus protocol. Paragraphs [0001] and [0002] should clearly identify it as such;

-Page 1, line 22, the term “multiplexer” is not correct – a multiplexer cannot process or execute an appliance program;

-Page 3, line 19, the terms “true table” are used where the correct English is “truth table”;

-Page 4, line 21, the terms “logic analysis” are used multiple times and are incorrect as discussed above in the objections to the abstract;

-Page 5, line 8, the definition of items in the truth table refers to **FIG. 4**, not the mentioned **FIG. 5**;

-Page 7, line 16, the terms “guild line” are used and this is clearly incorrect English, as these words have no technical meaning – it is unknown what the correct terminology would be.

Appropriate correction is required.

4. The disclosure is objected to because of the following informalities:

-pg. 1, the term “logic analysis device” is used, which, as stated above in the objections to the abstract and the title, is inaccurate and must be replaced with wording that is correct, idiomatic English;

-Pg. 1, line 8, the terms “the a” are incorrect English and must be replaced by “the”;

-Pg. 1, lines 9-10, the terms “retrieving data signal” are incorrect, and must be replaced with “retrieving a data signal”;

-Pg. 1, line 11, the terms “is being displayed” are used, and must be replaced with “is displayed”;

-Pg. 1, line 14, the term "is" must be inserted before the term "more";

-Pg. 1, line 15, the term "less number" is incorrect and must be replaced with "a lesser number";

-Et cetera.

Appropriate correction is required.

5. The specification is not written in correct, idiomatic English and is replete with replete with grammatical errors and misused or mistranslated terminology. Careful revision is required. Several examples of errors from the first page alone are provided above as a guidepost for revision.

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: in Figures 4-6, there is no element 21, the download bus (mentioned as present, page 5, line 2 of the specification).

7. The drawings are objected to because Figure 2 has the labels for the elements written at right angles, e.g. the drawing is meant to be viewed at a ninety degree angle, but the labels for the elements are ninety degrees off axis from the correct viewing angle and thus difficult to read. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

8. Applicant is advised that should claim 1 be found allowable, claim 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claim 6 is completely redundant in view of claim 1 – a universal serial bus is inherently a USB anyway.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

8. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 1-6 are rejected because the term "logic analysis device" is misused. That is, in the computer art a "logic analysis device" is a system such as a hardware-based logic analyzer unit capable of taking multiple simultaneous I/O readings for analyzing circuitry, et cetera. Again, see the objection to the abstract such that appropriate wording – e.g. – USB Operation and Speed Indicator System – should be used, as this wording renders the claim indefinite.

10. Claims 1-6 are also rejected because the term "download bus" is misused. A bus is a device or system used to connect various components within a system. Applicant is misusing a technical English term. The point at which each device is connected is called a "port"; therefore, the correct terminology would be "download port". Applicant has not announced that he is acting as his own lexicographer and redefining the term 'bus'. As such, the claim is indefinite for misusing the term.

Claims 2-6 are rejected for not correcting the deficiencies of the parent claim.

11. Claim 6 is rejected for being redundant and being indefinite – a universal serial bus is a USB inherently, and the claim as worded makes no sense.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (a) The invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

13. Claims 1, 2, 4 and 6 are rejected under 35 U.S.C. 102(a) as being anticipated by Belkin (Belkin User Manual, F5U231, "Hi-Speed USB 2.0 4-Port TetraHub" – user's manual, published 05-09-2003). (Below, the pages cited refer to the actual numbering of the pages in the Belkin user's manual, **not** the numbers of the physical paper pages in the reference – these numbers are clearly at the bottom of each of the manual pages!)[Also note – applicant's claimed 'logic analysis device / circuit' is nothing more than a speed analyzer on a USB hub – see disclosure. The claims have been rejected under 35 U.S.C. 112, second paragraph, as such, and will be treated as a hub, as that is the only conceivable type of 'logic analysis circuit' supported in the specification.]

As to claim 1,

A logic analysis device with transmission speed display indicators, suitable for applying in the universal serial bus (USB), the logic analysis device with transmission speed display indicators comprising: (pg. 1, USB 4-port hub that contains "multi-color LEDs that indicate the operating speed of each connected USB device and the speed of the link to the host computer")

-A display device, having a display element for displaying a transmission speed; (LEDs cited above, in more detail on pg. 8 for example – listing connection speeds and the corresponding LED colors)

-At least a logic analysis circuit, comprising a data signal input and data analyzed output, said data analyzed output being connected to said display device; (inherent, given that the hub shows the speed of the link, there must *prima facie* be such a circuit within in the hub)

-Said data signal input is being connected to a download bus of said USB, wherein a data corresponding to a transmission speed of a peripheral device connected to said USB is retrieved by said download bus of said USB for analysis and the transmission speed thereof is identified, and the identified data is transmitted to said display device to visually display said transmission speed of said peripheral device to aid the user to determine whether or not to activate other connected peripheral device so that breakdown can be avoided and an accuracy of data signal transmission can be promoted. (Belkin page 8 – "Each downstream port on the Hub has a corresponding LED that changes color according to the speed of the connected device as noted ..." The "downstream port" on the hub corresponds to the "download bus" of applicant, as applicant's specification clearly teaches multiple ports that applicant calls "download bus" for whatever reason.)

Clearly, the above-cited device anticipates all the limitations. The display device is a multicolor LED, which corresponds exactly to applicant's disclosure (LEDs are used as speed indicators in applicant's specification). Each port has its own speed indicators. The logic analysis circuit is really just a speed analysis circuit and is inherent in the hub, as it is self-contained and obviously performs these speed measurements. Therefore, reference Belkin clearly anticipates all these limitations.

As to claim 2,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said logic analysis device with transmission speed display indicators is set in a USB hub.

See the rejection for claim 1 – the device cited in claim 1 is clearly a USB hub.

As to claim 4,

The logic analysis device with a transmission speed display indicators according to claim 1, wherein said display element is a LED.

See the rejection for claim 1 – the device cited in Belkin clearly uses multicolor LEDs as status indicators – and it uses only one.

As to claim 6,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said universal serial bus is a USB.

See the rejection for claim 1 – the device is a USB hub, which is clearly what this claim is reciting (that is, some device that is USB). This claim is redundant and unnecessary.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belkin in view of PassMark (PassMark USB loop-back plug, website of company, product

page)(hereafter termed 'Plug')[Please note, PassMark reference is taken from Internet Archive, with date of 13 August 2002].

As to claim 3,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said logic analysis device with transmission speed display indicators is set in a USB connector.

Reference Belkin teaches a USB hub capable of analyzing and displaying the speed of USB transmission via LEDs. Reference Plug teaches a USB connector that has LEDs on it to indicate the status of the port – on, transmitting / receiving, and activity. Reference Plug further teaches that it is a diagnostic device for testing the status of USB ports. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Plug in view of Belkin to include speed-measuring capabilities, as the Plug is a diagnostic tool, and knowing the speed of a USB port is crucial to determining if it is functioning correctly (e.g. a high-speed port only supporting operation in low-speed mode would obviously be defective), and Belkin teaches an LED that displays transmission speed.

16. Claim 4 is rejected under 35 U.S.C. 103(a) as unpatentable over Belkin in view of Solumedia (Solumedia product page for Intel switch, copyright 2002)('Intel').

As to claim 4,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said display element is a LCD.

Belkin teaches a USB hub with LED indicators on it. Reference Intel teaches an Ethernet hub (Model 220T) that has an LCD on the front of it, which obviously could be used to show status information, port speed, et cetera. Clearly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Belkin reference in light of the Intel reference to have an LCD that showed speed information per port, as both references are hubs for various protocols and the LCD would be able to provide more information than the LED could.

17. Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as unpatentable over Background (that is, applicant's specification – the Background section) in view of Lanode (Lanode 10/100Mbps Ethernet switch product page from the web, clearly copyright 2000)('Lanode').

As to claim 1,

A logic analysis device with transmission speed display indicators, suitable for applying in the universal serial bus (USB), the logic analysis device with transmission speed display indicators comprising: (pg. 1, Background, USB hub disclosed as prior art)(Lanode, Ethernet switch, page 1, the front of the hub clearly has speed indicators (see bottom of page ("LED indicators for ... Speed ..."))

-A display device, having a display element for displaying a transmission speed; (LEDs cited above in Lanode, in more detail on pg. 2 for example – listing connection speeds and the LED indicators for them)

-At least a logic analysis circuit, comprising a data signal input and data analyzed output, said data analyzed output being connected to said display device; (inherent, given that the Lanode hub shows the speed of the link, there must *prima facie* be such a circuit within in the hub that detects link speed)

-Said data signal input is being connected to a download bus of said USB, wherein a data corresponding to a transmission speed of a peripheral device connected to said USB is retrieved by said download bus of said USB for analysis and the transmission speed thereof is identified, and the identified data is transmitted to said display device to visually display said transmission speed of said peripheral device to aid the user to determine whether or not to activate other connected peripheral device so that breakdown can be avoided and an accuracy of data signal transmission can be promoted. (Lanode page 2 – "Ports #1 to 8: Link, Activity, and Speed ..." Clearly these ports show unit speed. Lanode obviously has downlink ports – that is, the general hub ports).

Reference Background teaches the existence of tri-speed USB hubs. Reference Lanode clearly establishes an Ethernet hub with speed light indicators on it. Clearly, the USB hubs of Background must know the speed of the ports and peripheral devices involved and must be capable of auto-negotiation to find the peripheral speed. Further, Lanode clearly represents an auto-negotiating, multi-speed Ethernet hub. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the USB hubs of Background to have LED indicators so that they would show the link speed in the manner that Lanode does.

As to claim 2,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said logic analysis device with transmission speed display indicators is set in a USB hub.

See the rejection to claim 1 immediately above. The Background devices are hubs, as are the Lanode devices, so clearly that rejection covers this limitation.

As to claim 4,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said display element is an LED.

See the rejection to claim 1 immediately above. The combination shown there definitely has LED indicators to indicate speed and status.

As to claim 6,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said universal serial bus is a USB.

See the rejection for claim 1 – the device is a USB hub, which is clearly what this claim is reciting (that is, some device that is USB). This claim is redundant and unnecessary.

18. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Background in view of Lanode as applied to claim 1, and further in view of Plug.

As to claim 3,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said logic analysis device with transmission speed display indicators is set in a USB connector.

References Background and Lanode in combination as discussed in the rejection to claim 1 teach a USB hub capable of analyzing and displaying the speed of USB transmission via LEDs. Reference Plug teaches a USB connector that has LEDs on it to indicate the status of the port – on, transmitting / receiving, and activity. Reference Plug further teaches that it is a diagnostic device for testing the status of USB ports. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Plug in view of Background and Lanode to include speed-measuring capabilities, as the Plug is a diagnostic tool, and knowing the speed of a USB port is crucial to determining if it is functioning correctly (e.g. a high-speed port only supporting operation in low-speed mode would obviously be defective), and Background in combination with Lanode teaches an LED that displays transmission speed.

19. Claim 4 is rejected under 35 U.S.C. 103(a) as unpatentable over Background in view of Lanode as applied to claim 1 above, and further in view of Intel.

As to claim 4,

The logic analysis device with transmission speed display indicators according to claim 1, wherein said display element is a LCD.

Background combined with Lanode teaches a USB hub with LED indicators on it. Reference Intel teaches an Ethernet hub (Model 220T) that has an LCD on the front of it, which obviously could be used to show status information, port speed, et cetera. Clearly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Background and Lanode reference combination in light of the Intel reference to have an LCD that showed speed information per port, as both references are hubs for various protocols and the LCD would be able to provide more information than the LED could.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric V Woods whose telephone number is 703-305-0263. The examiner can normally be reached on M-F 7:30-5:00 alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eric Woods

January 4, 2005

Jeffrey A. Brier
JEFFERY BRIER
PRIMARY EXAMINER